200

210 GRID ASSOCIATOR

220 RESOURCE MONITOR

222 UTILIZATION THRESHOLDS

224 RESOURCE ALLOCATOR

230 CAPACITY MANAGER

235 MANUFACTURER CODE AUTHENTICATOR

240 ON-DEMAND RESOURCES

250 RESOURCE METER

252 GRID RESOURCE METER

254 ON-DEMAND RESOURCE METER

256 RATE DETERMINER

258 CLIENT RATE DATABASE

260 CLIENT USAGE LOG

270 BILLING GENERATOR

START

RECEIVING REQUEST/AGREEMENT FROM CLIENT FOR GRID AND ON-DEMAND RESOURCES — 310

ASSOCIATING CLIENT WITH THE GRID — 315

SETTING A PARTITION THRESHOLD AND A GRID THRESHOLD — 320

MONITORING USAGE OF PARTITION RESOURCES — 325

390 DISABLING GRID RESOURCES

REACHED PARTITION THRESHOLD? — 330

NO

YES

300

DETERMINING UNDERUTILIZED GRID RESOURCES — 335

370 ENABLING USAGE OF/ DETERMINING RATE FOR USAGE OF GRID RESOURCES BY CLIENT

GRID RESOURCES AVAILABLE FOR CLIENT? — 340

YES

NO

METERING AND LOGGING USAGE BY CLIENT — 375

AT GRID THRESHOLD? — 380

YES

NO

ON-DEMAND RESOURCES ENABLED? — 345

NO

ENABLING/ DETERMINING RATE FOR USAGE OF ON-DEMAND RESOURCES BY CLIENT — 350

NO

BELOW PARTITION THRESHOLD? — 385

YES

YES

METERING/ LOGGING USAGE OF ON-DEMAND RESOURCES BY CLIENT — 355

NO

BELOW GRID THRESHOLD? — 360

YES

DISABLING ON-DEMAND RESOURCES IF TEMPORARY — 365

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                                    ┌──────────┐
                                    │  START   │
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              ┌──────────────────────────────────────────┐ ╭─410
              │ CONTRACTING WITH CLIENT TO PROVIDE FOR     │
              │ USAGE OF ON-DEMAND RESOURCES               │
              └──────────────────────────────────────────┘
                                          │
                                          ▼
              ┌──────────────────────────────────────────┐ ╭─420
              │ ENABLING USE OF GRID RESOURCES WHEN        │
              │ USAGE OF PARTITION RESOURCES MEETS OR      │
              │ EXCEEDS A PARTITION THRESHOLD              │
              └──────────────────────────────────────────┘
                                          │
                                          ▼
              ┌──────────────────────────────────────────┐ ╭─430
              │ ENABLING USE OF ON-DEMAND RESOURCES        │
              │ WHEN USAGE OF GRID RESOURCES MEETS OR      │
              │ EXCEEDS A GRID THRESHOLD                   │
              └──────────────────────────────────────────┘
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                                          ▼
              ┌──────────────────────────────────────────┐ ╭─440
              │ METERING USE OF ON-DEMAND RESOURCES        │
              └──────────────────────────────────────────┘
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              ┌──────────────────────────────────────────┐ ╭─450
              │ BILLING THE CLIENT FOR USAGE OF ON-DEMAND  │
              │ RESOURCES                                  │
              └──────────────────────────────────────────┘
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                                    │   END    │
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400

500

START

510
CONTRACTING WITH CLIENT TO OBTAIN CLIENT
RESOURCES FOR GRID RESOURCES

520
ENABLING USE OF CLIENT RESOURCES WHEN IDLE

530
ENABLING USE OF GRID RESOURCES WHEN
USAGE OF PARTITION RESOURCES MEETS OR
EXCEEDS A PARTITION THRESHOLD

540
METERING USE OF CLIENT RESOURCES

550
PAYING THE CLIENT FOR USAGE OF CLIENT
RESOURCES

END